

## PCT

INTERNATIONAL SEARCH REPORT  
(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 85795-74	<div style="text-align: center;"><b>FOR FURTHER ACTION</b></div> <div style="text-align: right;">see Form PCT/ISA/220 as well as, where applicable, item 5 below.</div>	
International application No. PCT/CA2004/001843	International filing date ( <i>day/month/year</i> ) 20 October 2004 (20-10-2004)	(Earliest) Priority date ( <i>day/month/year</i> ) 20 October 2003 (20-10-2003)
Applicant THERATECHNOLOGIES INC. ET AL		
This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.		
<p>This international search report consists of a total of <u>6</u> sheets.</p> <p><input checked="" type="checkbox"/> It is also accompanied by a copy of each prior art document cited in this report.</p> <p>1. Basis of the report</p> <p>a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.</p> <p style="padding-left: 40px;"><input type="checkbox"/> the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).</p> <p>b. <input checked="" type="checkbox"/> With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.</p> <p>2. <input checked="" type="checkbox"/> Certain claims were found unsearchable (See Box II).</p> <p>3. <input type="checkbox"/> Unity of invention is lacking (See Box III).</p> <p>4. With regard to the title.</p> <p style="padding-left: 40px;"><input type="checkbox"/> the text is approved as submitted by the applicant.</p> <p style="padding-left: 40px;"><input checked="" type="checkbox"/> the text has been established by this Authority to read as follows :</p> <p style="padding-left: 40px;">Use of growth hormone releasing factor analogs in treating patients suffering from wasting.</p> <p>5. With regard to the abstract.</p> <p style="padding-left: 40px;"><input type="checkbox"/> the text is approved as submitted by the applicant.</p> <p style="padding-left: 40px;"><input checked="" type="checkbox"/> the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.</p> <p>6. With regard to the drawings,</p> <p>a. The figure of the drawings to be published with the abstract is Figure No.</p> <p style="padding-left: 40px;"><input type="checkbox"/> as suggested by the applicant.</p> <p style="padding-left: 40px;"><input type="checkbox"/> As selected by this authority, because the applicant failed to suggest a figure.</p> <p style="padding-left: 40px;"><input type="checkbox"/> As selected by this Authority, because this figure better characterizes the invention.</p> <p>b. <input checked="" type="checkbox"/> None of the figures is to be published with the abstract.</p>		

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/CA2004/001843A. CLASSIFICATION OF SUBJECT MATTER  
Int; A61K 38/25; A61P 21/00

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
Int; A61K 38/25; A61P 21/00Electronic data base consulted during the international search (name of data base, and, where practicable, search terms used)  
Canadian Patent Database; Delphion; PubMed; Dgene; Keywords: growth hormone releasing hormone, GHRH, growth hormone releasing factor, GRF, growth hormone, GH, and secretagogue, analogs and peptides of growth hormone, hydrophobic, muscle wasting, cachexia, somatotropin

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CA2367461 BRISTOL-MYERS SQUIBB COMPANY, (Swartz SG et al.) 21 September 2000 claims 20-22 and 25	1, 8-11, 13-17, 22-25, 32-35, 37-41, 46, 49 and 74
Y	whole document	1-80
X	CA2357853 PFIZER PRODUCTS INC, (Fryburg DA) 28 March 2002 claims 1-11, and 25	1, 8-11, 22-25, 32-35, 46-50, 57-60, 62, 63 and 71-74
Y	whole document	1-80
Y	US6458764 THERATECHNOLOGIES INC, (Gravel D et al.) 01 October 2002 whole document	1-80

Further documents are listed in the continuation of Box C.

Patent family members are listed in annex.

* Special categories of cited documents :	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international-type search  
14 January 2005 (14-01-2005)Date of mailing of the international-type search report  
02 March 2005 (02-03-2005)Name and mailing address of the ISA/CA  
Commissioner of Patents  
Canadian Patent Office - PCT  
Ottawa/Gatineau K1A 0C9  
Facsimile No. 1-819-953-9358Authorized officer  
Nicole Harris (819) 997-4541

**Box No. II** Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons :

1. ☒ Claims Nos. :  
because they relate to subject matter not required to be searched by this Authority; namely:  
Remarks: Claims 1-48 and 50-73 are considered to be directed towards methods of medical treatment of a human or animal which the authority is not required to search under Rule 39.1(iv) of the PCT. However, a search has been established based on the use of the compounds/compositions.
2. ☐ Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically :
3. ☐ Claims Nos. :  
because they are dependant claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box III** Observation where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows :

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos. :
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos. :

Remark on Protest ☐ The additional search fees were accompanied by the applicant's protest.  
☐ No protest accompanied the payment of additional search fees.

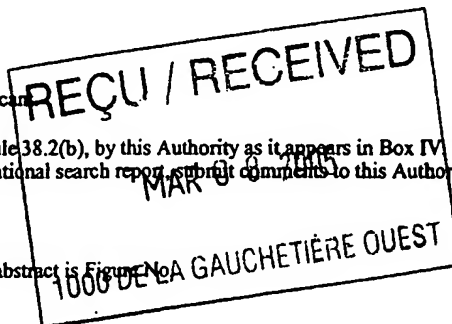
Patent Document Cited in Search Report	Publication Date	Patent Family Member(s)	Publication Date
CA2367461	21-09-2000	AU3512500 A	04-10-2000
		BG105843 A	31-05-2002
		BR0008937 A	24-09-2002
		CN1344160T T	10-04-2002
		CZ20013254 A3	12-06-2002
		EE200100479 A	16-12-2002
		EP1175213 A2	30-01-2002
		HU0201787 A2	28-09-2002
		IL144592D D0	23-05-2002
		JP2002539141T T	19-11-2002
		NO20014407 A	08-11-2001
		SK12272001 A3	08-10-2002
		TR200102780T T2	21-08-2002
		US6518292 B1	11-02-2003
		US6525203 B1	25-02-2003
		US6660760 B1	09-12-2003
		US2004002525 A1	01-01-2004
		US2004029935 A1	12-02-2004
		US2004072881 A1	15-04-2004
		WO0054729 A2	21-09-2000
		ZA200106854 A	20-11-2002
CA2357853	28-03-2002	AU7613001 A	11-04-2002
		EP1192943 A2	03-04-2002
		HU0103941 A2	29-06-2002
		IL145540D D0	30-06-2002
		JP2002145801 A	22-05-2002
		US2002151551 A1	17-10-2002
		ZA200107905 A	29-04-2003
US6458764	01-10-2002	AT204881T T	15-09-2001
		AU697119 B2	24-09-1998
		AU755852 B2	19-12-2002
		AU5500799 A	27-03-2000
		AU5683396 A	11-12-1996
		BR9608799 A	07-12-1999
		BR9913515 A	05-06-2001
		CA2222068 A1	28-11-1996
		CA2342070 A1	16-03-2000
		DE1109909T T1	23-05-2002
		DE69614849D D1	04-10-2001
		DE69614849T T2	16-05-2002
		DK828758T T3	07-01-2002
		EP0828758 A1	18-03-1998
		EP1109909 A2	27-06-2001
		ES2163020T T3	16-01-2002
		ES2164626T T1	01-03-2002
		JP3576170B2 B2	13-10-2004
		JP2002524472T T	06-08-2002
		PT828758T T	28-02-2002
		US5861379 A	19-01-1999
		US5939386 A	17-08-1999
		US6020311 A	01-02-2000
		US2004171534 A1	02-09-2004
		WO0014236 A2	16-03-2000
		WO9637514 A1	28-11-1996

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL SEARCH REPORT (PCT Article 18 and Rules 43 and 44)

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b. <input checked="" type="checkbox"/> None of the figures is to be published with the abstract.			



**Box No. 1** Nucleotide and/or amino acid sequence(s) (Continuation of item 1.b of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, the international search was carried out on the basis of:

a. type of material

☒ a sequence listing

☐ table(s) related to the sequence listing

b. format of material

☒ in written format

☒ in computer readable form

c. time of filing/furnishing

☒ contained in the international application as filed

☒ filed together with the international application in computer readable form

☐ furnished subsequently to this Authority for the purposes of search

2. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

3. Additional comments:

SEQ ID NO:1 of the sequence listing does not comply with the standard provided for in Annex C and Annex C-bis of the Administrative Instructions. The use of "Xaa" may define more than one amino acid in a single position, but rather than using "Xaa" the applicant should positively define all amino acids and specify each "variant" as having one or more substitutions at a designated position. Further, the substitution of "Xaa" must not alter the length of said sequence. Such is not the case with the substitution at position 30, where "Xaa" is an amino acid sequence of 1 up to 15 residues or is a bond.

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/CA2004/001843

## Box No. II Observations where certain claims were found unsearchable (Continuation of Item 2 of first sheet)

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Box IV

Text of the abstract (Continuation of item 5 of first sheet)

The present invention provides methods for using growth hormone releasing factor analogs of the formula (A), X-GRF Peptide, and pharmaceutically acceptable salts thereof, for increasing muscle function in a subject. Also disclosed herein are corresponding methods, packages and compositions.



## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/CA2004/001843A. CLASSIFICATION OF SUBJECT MATTER  
Int; A61K 38/25; A61P 21/00

## B. FIELDS SEARCHED

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
Int; A61K 38/25; A61P 21/00Electronic data base consulted during the international search (name of data base, and, where practicable, search terms used)  
Canadian Patent Database; Delphion; PubMed; Dgene; Keywords: growth hormone releasing hormone, GHRH, growth hormone releasing factor, GRF, growth hormone, GH, and secretagogue, analogs and peptides of growth hormone, hydrophobic, muscle wasting, cachexia, somatotropin

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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international-type search  
14 January 2005 (14-01-2005)Date of mailing of the international-type search report  
02 March 2005 (02-03-2005)Name and mailing address of the ISA/CA  
Commissioner of Patents  
Canadian Patent Office - PCT  
Ottawa/Gatineau K1A 0C9Authorized officer  
Nicole Harris (819) 997-4541

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No.  
**PCT/CA2004/001843**

Patent Document Cited in Search Report	Publication Date	Patent Family Member(s)	Publication Date
CA2367461	21-09-2000	AU3512500 A	04-10-2000
		BG105843 A	31-05-2002
		BR0008937 A	24-09-2002
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		CZ20013254 A3	12-06-2002
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		US6525203 B1	25-02-2003
		US6660760 B1	09-12-2003
		US2004002525 A1	01-01-2004
		US2004029935 A1	12-02-2004
		US2004072881 A1	15-04-2004
		WO0054729 A2	21-09-2000
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		US5939386 A	17-08-1999
		US6020311 A	01-02-2000
		US2004171534 A1	02-09-2004
		WO0014236 A2	16-03-2000
		WO9637514 A1	28-11-1996